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Brevard County

BOARD OF COUNTY COMMISSIONERS
TITUSVILLE, FLORIDA

December 1, 1972

E72-10254
CR-129185

PROGRESS REPORT

Urban and Regional Planning Proposal No. Y-10-066-001
SR 196

Several standing order images of the area, with varying amounts of cloud cover, have been received. Between them, coverage of essentially the entire area is available.

Digital tapes of the data with lowest cloud cover have been requested. Pending their receipt, a computer program is being written to convert the data to radiance units and map them by band.

Preliminary visual interpretation of the images of the four bands has led to some tentative opinions regarding relative utility of the four bands from the standpoint of the purposes of this project:

Band 4 -

(1) Provides about the same information as that described in items 1 to 9 under band 5, but the contrast is less in band 4.

(2) Water penetration -

Serves as rough indicator of lake depths; shallow lakes are clearly distinguishable from deeper lakes. Good indication of bottom pattern off beaches; should be useful in beach erosion studies.

(3) "Wispy" clouds show up on band 4. When looking at other bands (e.g., 6), wispy clouds can lead to errors, which can be prevented by checking against band 4.

(E72-10254) URBAN AND REGIONAL PLANNING
Progress Report J.W. Hannah (Brevard
County Planning Dept., Titusville) 1 Dec.
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FLORIDA SPACE COAST

Band 5 -

Gives the greatest contrast for features on land, therefore, appears to be the most useful band for this purpose.

- (1) Good distinction between urban and non-urban areas
- (2) Street and development patterns within cities
- (3) Apparent radiance differences between cities (The reality of this apparent difference needs to be checked by the digital data; it may be due to differences in contrast with surroundings--water vs. land.)
- (4) Good indication of landscape disturbances (e.g., large-scale residential development, truck farming, phosphate mining, canal dredging, new land fill); at least this is true in Florida, where the sand has high reflectance.
- (5) Definition of beaches and major highways
- (6) Identification of some farm plots
- (7) Identification of general land use patterns; areas of general agricultural use appear to be delineated
- (8) Identification of heavily vegetated areas
- (9) General matching of patterns with soil maps. The agreement is sometimes striking; at some locations, differences are apparent.

Band 6 -

- (1) Identification of water surface vs. land
- (2) Drainage patterns
- (3) Delineation of areas of wet soil
- (4) Excellent delineation of rivers
- (5) Good indicator of wetlands (swamps and water within swamp or wetlands; e. g., wetlands along the Gulf Coast)
- (6) Some vegetative differences.

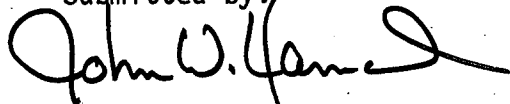
Band 7-

- (1) Clear definition of water surface
- (2) Drainage patterns
- (3) Moist soil
- (4) Detects map errors with regard to streams, swampy areas,
lake shapes
- (5) Pattern of individual muck farms bordering Lake Apopka.

It is emphasized that the above observations are preliminary and require analysis, ground checking, and checking with the digital data.

The two sets of images of this area with least cloud cover are those for 6 September and 30 October. There are distinct differences in gray scale between the two sets of images. As indicated by the gray scale tablet, the difference is due primarily to processing differences. We find the processing of the 30 October images to give the more useful output, in agreement with the contrasts in the gray scale tablet.

Submitted by:

A handwritten signature in black ink, appearing to read "John W. Hannah", with a stylized flourish at the end.

John W. Hannah
Principal Investigator

H/a